

REMARKS

Claims 1-6 and 20-27 are pending in the present application. Independent claims 1 and 23 were amended in this response. No new matter has been introduced as a result of the amendments. Entry of the amendments and favorable reconsideration are earnestly requested.

OBJECTIONS TO THE SPECIFICATION

The specification was objected to as allegedly failing to provide proper antecedent basis for the claimed subject matter. Specifically, the Office Action argues that the computer-readable recording medium as found in claims 20-22 and 25 “should be clearly defined in the specification as a statutory medium (i.e. precluding storage on carrier waves, signals, etc.) so to enable the scope of the medium to be realized” (see page 3 of Office Action). Applicant respectfully submits that the present application conforms fully with the requirements of 37 C.F.R. §1.75(d)(1) and MPEP §608.01(o), and can find no basis whatsoever for the present objection that is supported by law. Essentially, the Office Appears to be proposing a *per se* rule in the Office Action, where, unless potentially non-statutory subject matter is disclaimed in the specification in each instance, one skilled in the art could not discern the meaning of such terms when recited in the claims. Such a position is clearly improper, and is not supported by caselaw, or any of the statutory and regulatory provisions provided in the Office Action. Withdrawal of the objection is earnestly requested.

CLAIM REJECTIONS – 35 U.S.C. §101

Similarly, claims 1-9, 23 and 26-27 were rejected under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter. Again, Applicant is perplexed by the rationale for this rejection, as the Office Action states that the apparatus “may be composed of software units,” and, due to the possibility that the apparatus may be entirely comprised of software, renders the claims “not statutory because they are software per se (or functional descriptive material per se)” (see page 3 of Office Action). Nowhere in the MPEP, nor in any statutory and regulatory laws of the United States, is there a provision that bars patentability to subject matter

related to software *per se*. The Office Action correctly cites MPEP 2106.01, which addresses “*data structures*” and “*computer listings*.” However, these structures/listings are merely specific subsets of software algorithms, and do not represent software as a whole. Thus, it is incorrect at the outset to claim that “software *per se*” is not patentable subject matter.

In the interests of progressing prosecution, Applicant has amended independent claims 1 and 23 to include the recitation of a computer processor. In this regard, the Office cannot claim that the present claims are non-statutory “*data structures*” or “*computer listings*.” MPEP 2106.01(I) provides in relevant part:

Data structures not claimed as embodied in computer-readable media are descriptive material *per se* and are not statutory because they are not capable of causing functional change in the computer. See, e.g., *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure *per se* held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a data structure defines structural and functional interrelationships between the data structure and the computer software and hardware components which permit the data structure's functionality to be realized, and is thus statutory.

Similarly, computer programs claimed as computer listings *per se*, i.e., the descriptions or expressions of the programs, are not physical “things.” They are neither computer components nor statutory processes, as they are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035. Accordingly, it is important to distinguish claims that define descriptive material *per se* from claims that define statutory inventions.

Computer programs are often recited as part of a claim. USPTO personnel should determine whether the computer program is being claimed as part of an otherwise statutory manufacture or machine. In such a case, the claim remains statutory irrespective of the fact that a computer program is included in the claim. The same result occurs when a computer program is used in a computerized process where the computer executes the instructions set forth in the computer program. Only when the claimed invention taken as a whole is directed to a mere program listing, i.e., to only its description or expression, is it descriptive material per se and hence nonstatutory (emphasis added).

Amended claims 1 and 23 each recite a “processing apparatus” and a “computer processor” that processes attributes of a file using weights, and visually represents a weight as being heavy or light, where a display position indicates exertion of a virtual force, and indicates “whether the object is comparatively heavy or light with a difference in the display position in the direction of the virtual force.” Since functional change in a “real world” environment is clearly being recited, data structures as defined in MPEP 2106.01 are not an issue. Similarly, a computer listing *per se* is not being claimed. Accordingly, there is no basis upon which the Office can maintain the present §101 rejection. As such, Applicant respectfully requests that the rejection be withdrawn.

CLAIM REJECTIONS – 35 U.S.C. §103

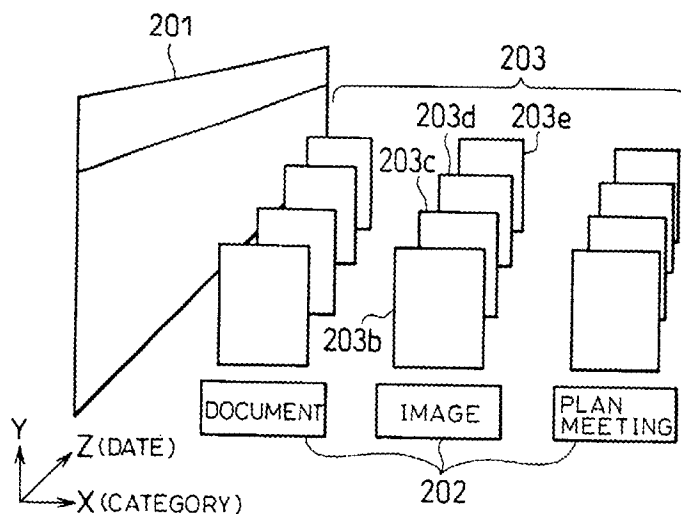
Claims 1, 3-6, 9, 10, 12-14, 16 and 20-25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Aoki et al. (US Patent 6,253,218) in view of Brosnan et al. (US Pat. Pub. 2004/002380).

Claims 2 and 11 were rejected under 35 U.S.C. §103(a) as being unpatentable over Aoki et al. (US Patent 6,253,218) in view of Brosnan et al. (US Pat. Pub. 2004/002380) and further in view of Vaananen et al. (US Pat. Pub. 2002/0175896).

Claims 7, 8 and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Aoki et al. (US Patent 6,253,218) in view of Brosnan et al. (US Pat. Pub. 2004/002380) and further in view of Adler (US Patent 6,340,957). Applicant respectfully traverses these rejections.

Specifically, the prior art, alone or in combination, fails to teach or suggest the features of “setting a relative display position of a predetermined object that symbolically represents the files in terms of whether the weight thereof is heavy or light, based on a value of a predetermined attribute for an intended file” as recited in independent claim 10, and similarly recited in independent claims 1, 12, 14, and 20-25. Under the recited configuration, a specific attribute may be processed and visualized for a user as a relative weight, which in turn allows a user to better understand the significance of the attribute relative to other attributes and/or files (see, e.g., [0050-52]). The weight of the attribute is dependent upon the value of the attribute.

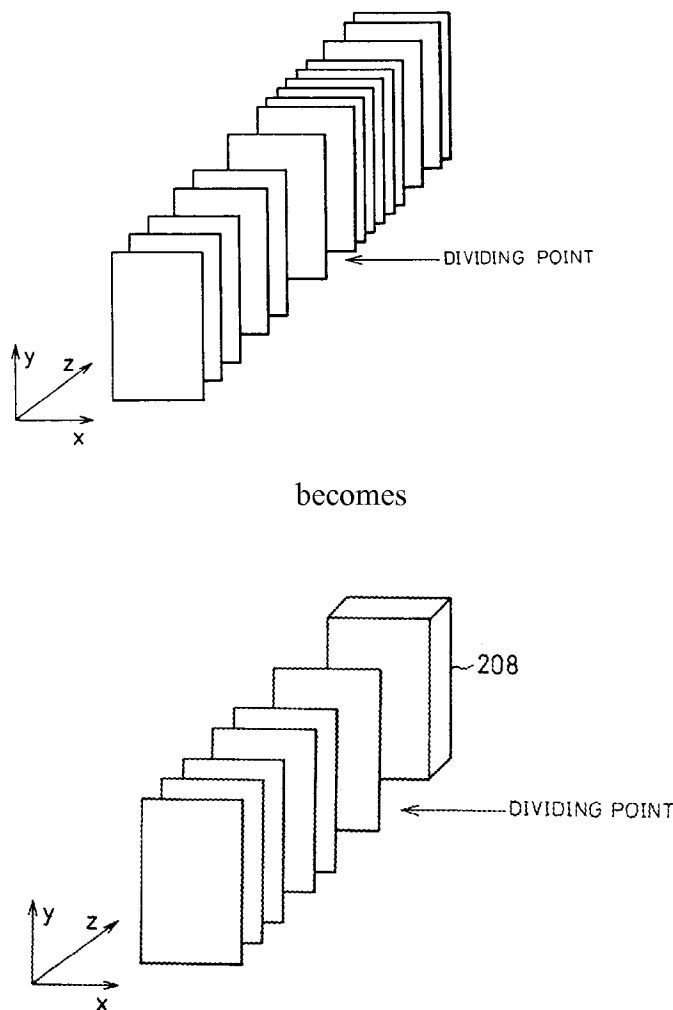
In contrast, Aoki discloses a data display method for enabling the user to understand the content of each item of the data in a single tabulated form (FIG. 3), where the user retrieves data through “visualized relationships” between individual data files in the database and each item of the data (col. 2, lines 6-13). The embodiments disclosed in Aoki show that file attributes may be arranged in a 3-D space, where each axis represents a specific attribute (e.g., time, category, etc.) (see FIGs. 3, 25, 27).



In each of the embodiments, Aoki discloses that the attributes (203) are separated (203b-e) and grouped individually according to a particular reference attribute (201, 202). However, Aoki clearly does not disclose signifying the attribute as a particular weight, as presently claimed. The Office Action points to the embodiment in FIGs. 44-47 in Aoki to argue that the “density” visualization is equivalent to the presently claimed features. However, the Office

Action misinterprets the technical features of the density grouping in Aoki as it relates to the present claims.

Aoki clearly states that, since numerous attributes will begin to cluster together over time in a sub-space, it will become increasingly difficult for users to distinguish between multiple attributes in a subspace. Accordingly, Aoki proposes a “density judging section” 43 that counts the number of figures (i.e., attributes) in a unit length, and, if the count exceeds a specific value, groups the attributes together under a “group figure.” Turning to FIGs. 46-47 of Aoki:



where the “dense” attributes are collectively represented as group figure 208, making “hard to see” images more “distinguished” for user viewing (see col. 21, lines 7-22).

While the Office Action apparently equates group figure 208 as a visualization of weight, the Office Action does not account for how the group figure 208 of Aoki relates to an attribute/attribute value that is related to a respective file. Claim 1 recites “an attribute input unit

which acquires a value of an attribute for at least one file in order to represent a value of a predetermined attribute for an intended file.” Similarly, Claim 10 recites “setting a relative display position of a predetermined object that symbolically represents the files in terms of whether the weight thereof is heavy or light, based on a value of a predetermined attribute for an intended file.” The same features are similarly recited in claims 12, 14, and 20-25. As the group figure 208 of Aoki relates to a number of image files counted, this cannot be considered “a predetermined attribute for an intended file,” since the number of files in a sub-space is not related to any single file.

The Response to Arguments in the Office Action (page 26) submits that col. 13, lines 31-35 discloses the heavy/light weighted features. However, this is incorrect – no such teaching exists in the cited text. Instead, just as in the other embodiments discussed above, Aoki groups individual attributes according to a respective axis, depending on the sorting criteria (e.g., time of creation, file type, etc.). Nothing whatsoever relating to weight is discussed. With all due respect, the notion that the depth of an axis is somehow related to the weight of a respective attribute for a file, and the virtual force that is exerted upon it is specious (see Office Action, page 5, second-to-last paragraph; page 27, last paragraph). Under what definition would one skilled in the art view the placement of attributes along a linear axis as a “weight” for a specific attribute? Such strained claim interpretation and stretching of prior art teachings, unhinged from the understandings of one skilled in the art, is neither reasonable nor proper.

Also, Aoki fails to teach or suggest the feature of exerting a virtual force on the object as presently claimed. Again, the Office Action appears to claim that each axis (e.g., Z-axis) of Aoki represents a “virtual force” that is being “exerted” (page 5, second-to-last paragraph: “with a difference in the display position in the direction of the virtual force”). Under what possible definition would one skilled in the art attribute the placement of attributes along a linear axis as a “virtual force” that is “exerted”? Applicant has read and re-read the text in pages 5 and 26-27 of the Office Action as it relates to Aoki, and is at a loss understanding what rationale is being utilized in the rejection. The Office Action goes further to suggest that Aoki fails to teach that the virtual force is exerted “at least in one direction” (last 2 lines, page 5). However, this directly contradicts the Office Action’s earlier (and erroneous) interpretation equating the placing of

attributes along a linear axis to an application of a “virtual force” – *by definition, each linear axis would stem into a respective direction.*

The disclosure of Aoki is silent or teaches away from the claimed configuration. Nevertheless, the Office Action turns to Brosnan as allegedly solving the deficiencies of Aoki, discussed above. Applicant maintains that there is no apparent reason why one having ordinary skill in the art would combine the teachings of Brosnan with Aoki in the manner suggested in the Office Action. As the Office is aware, the U.S. Supreme Court recently held that rigid and mandatory application of the “teaching-suggestion-motivation,” or TSM, test is incompatible with its precedents. *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). The Court did not, however, discard the TSM test completely; it noted that its precedents show that an invention “composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.*

In the present case, Brosnan relates to a trajectory of an object based on the virtual physical properties of the object. There is no teaching in Brosnan relating to a static display position based on a non-physical attribute, for instance a file size, and therefore there is no reason to combine Brosnan with Aoki to arrive at the instant invention. The combination of Brosnan and Aoki is improper since they relate to different fields of endeavor.

Additionally, the display in Brosnan does not relate to displaying objects subject to a virtual force based on a value of an attribute of a file, as recited in the claim. Therefore, neither reference discloses, nor suggests, visually representing a file in terms of an attribute in terms of whether the object is light or heavy. As argued previously, the Office Action relies on Aoki and figures 46 and 47 as disclosing this feature (Office Action; page 4). However, the cited sections of Aoki suggest representing files in “less dense sub-spaces” (Aoki; col. 20, line 43), and show virtual pages in a 3-D space arranged according to file size (figures 47 and 47). However, none of the Aoki disclosure relates to displaying a file subject to a virtual force based on whether it is light or heavy. Brosnan merely takes the direction of gravitational force in consideration in determining the direction of movement and trajectory of the object. Generally, the same game object is displayed

For at least these reasons, Applicant submits the rejections to independent claims 1, 10, 12, 14, and 20-25 under 35 U.S.C. §103 are improper and should be withdrawn. Since the

remaining claims depend directly and/or indirectly to the independent claims, they are allowable for the same reasons. As such, an early Notice of Allowance is earnestly requested. If any fees are due in connection with this application as a whole, the Examiner is authorized to deduct such fees from deposit account no. 50-1290. If such a deduction is made, please indicate the attorney docket number SCEP 20.732 (100809-00225) on the account statement.

Respectfully submitted,

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